

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

COMBINED DECLARATION AND POWER OF ATTORNEY

FOR JOINT INVENTORS

As the below named coinventors, we hereby declare that:

Our residences, post office addresses and citizenships are as stated below next to our names. We believe we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled as follows: HUMAN SUPPRESSOR tRNA OLIGONUCLEOTIDES AND METHODS OF USE FOR SAME, the specification and drawings of which are attached hereto.

We hereby state that we have reviewed and understand the contents of the above identified specification and drawings, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code Of Federal Regulations, Section 1.56. We further declare that no application for patent or inventor's certificate on this invention has been filed by us, our legal representatives or assigns in any country foreign to the United States of America except as identified below:

NONE.

We hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112.

We acknowledge the duty to disclose information that is material to the examination of this application, namely, information where there is substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, which

occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS  
DESIGNATING THE U.S. FOR BENEFIT  
UNDER 35 U.S.C. § 120:

U.S. APPLICATIONS

Status (Check One)

| Appln. No. | Filing Date |  | Patented | Pending | Abandoned |
|------------|-------------|--|----------|---------|-----------|
| 60/071,416 | 01/14/98    |  |          | X       |           |
|            |             |  |          |         |           |
|            |             |  |          |         |           |

PCT APPLNS. DESIGNATING THE U.S.

| PCT Appln. No. | PCT Filing Date | U.S. Serial N Assigned (if any) | Patente | Pending | Abandoned |
|----------------|-----------------|---------------------------------|---------|---------|-----------|
|                |                 |                                 |         |         |           |
|                |                 |                                 |         |         |           |

And we hereby appoint ZARLEY, McKEE, THOMTE, VOORHEES & SEASE, comprising Donald H. Zarley, Registration No. 18,543; Bruce W. McKee, Registration No. 19,651; Dennis L. Thomte, Registration No. 22,497; Michael G. Voorhees, Registration No. 25,715; Edmund J. Sease, Registration No. 24,741; Mark D. Hansing, Registration No. 30,643; Kirk M. Hartung, Registration No. 31,021; Daniel J. Cosgrove, Registration No. 36,770; Michael R. Crabb, Registration No. 37,298; Heidi S. Nebel, Registration No. 37,719; Wendy K. Hartung, Registration No. 39,705; Jeffrey D. Harty, Registration No. 40,639; James A. Napier, Registration No. 42,025; and Mark Ziegelbein, Registration No. 43,307; 801 Grand Avenue, Suite 3200, Des Moines, Iowa 50309, Telephone 515-288-3667, our attorneys to prosecute this application and to transact all business in the Patent Office connected therewith.

We hereby declare that all statements made herein are of our own knowledge are true and that all statements made on information and belief are believed to be true; and further

that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

1001-1001

SIGNATURES

Inventor's signature: R. Panchal

Date: 1/13/99

✓ Full name of joint inventor: Rekha G. Panchal

Residence: Des Moines, Iowa

Post Office Address: c/o  
Human Gene Therapy Research Inst.  
Iowa Methodist Medical Center  
1415 Woodland Street  
Des Moines, Iowa 50309

Country of Citizenship: India

Inventor's signature: Charles J. Link, Jr.

Date: 1/13/99

✓ Full name of joint inventor: Charles J. Link, Jr.

Residence: Des Moines, Iowa

Post Office Address: c/o  
Human Gene Therapy Research Inst.  
Iowa Methodist Medical Center  
1415 Woodland Street  
Des Moines, Iowa 50309

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
COMBINED DECLARATION AND POWER OF ATTORNEY  
FOR JOINT INVENTORS

As the below named coinventors we hereby declare that:

Our residence, post office addresses and citizenships are as stated below next to our names. We believe we are the original, first and joint inventors, of the subject matter which is claimed and for which a patent is sought on the invention entitled as follows:  
**HUMAN SUPPRESSOR tRNA OLIGONUCLEOTIDES AND METHODS OF USE FOR SAME**, the specification of which are attached hereto.

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code Of Federal Regulations, Section 1.56. We further declare that no application for patent or inventor's certificate on this invention has been filed by us, our legal representative or assigns in any country foreign to the United States of America except as identified below:

NONE.

We hereby claim benefit under Title 35, United States Code § 119(e) of any provisional application(s) listed below:

60/071,416  
(Application Number)

01/14/98  
(Filing Date)

\_\_\_\_\_  
(Application Number)

\_\_\_\_\_  
(Filing Date)

We hereby appoint the attorneys of record listed under Customer No. 22885 at ZARLEY, McKEE, THOMTE, VOORHEES & SEASE, 801 Grand Avenue, Suite 3200, Des Moines, Iowa 50309 (telephone number 515-288-3667 and fax number 515-288-1338), as our attorneys to prosecute this application and to transact all business in the Patent Office connected therewith.

Please direct all correspondence to the attention of Heidi S. Nebel, Zarley, McKee, Thomte, Voorhees & Sease, 801 Grand Avenue, Suite 3200, Des Moines, Iowa, 50309-2727 (telephone number 515-288-3667).

We hereby declare that all statements made herein are of our own knowledge are true; and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001

of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

**SIGNATURES**

Inventor's signature: R. G. Panchal

Date: 1/30/01

Full name of joint inventor: Rokha G. Panchal

Residence: Des Moines, Iowa

Post Office Address: c/o Human Gene Therapy Research Inst.  
Iowa Methodist Medical Center  
1415 Woodland Avenue  
Des Moines, Iowa 50309

Country of Citizenship: ~~India~~ United States of America

R. G. Panchal  
3/30/01

Inventor's signature: C. J. Link, Jr.

Date: 1/30/01

Full name of joint inventor: Charles J. Link, Jr.

Residence: Des Moines, Iowa

Post Office Address: c/o Human Gene Therapy Research Inst.  
Iowa Methodist Medical Center  
1415 Woodland Avenue  
Des Moines, Iowa 50309

Country of Citizenship. United States Of America

## ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto:

Human Gene Therapy Research Institute  
Iowa Methodist Medical Center  
1415 Woodland Avenue  
Des Moines, Iowa 50309

its successors and assigns, the entire right, title and interest so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention entitled HUMAN SUPPRESSOR tRNA OLIGONUCLEOTIDES AND METHODS OF USE FOR SAME as set forth in his United States Patent Application

\_\_\_\_\_ executed concurrently herewith  
\_\_\_\_\_ executed on \_\_\_\_\_  
X Serial No. 09/229,212 filed 01/13/99

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by

the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be of said invention, and to testify in any proceedings relating to said inventions, patent applications, Letters Patent.

The undersigned hereby grant an authorized representative of Assignee the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

| NAMES AND SIGNATURES OF INVENTORS |                                      |               |
|-----------------------------------|--------------------------------------|---------------|
| Name: REKHA G. PANCHAL            | Signature: <i>R. Panchal</i>         | Date: 1/13/99 |
| Name: CHARLES J. LINK, JR.        | Signature: <i>C. J. Link</i>         | Date: 1/13/99 |
| Name:                             | Signature:                           | Date:         |
| Name:                             | Signature:                           | Date:         |
| Name:                             | Signature:                           | Date:         |
| Name:                             | Signature:                           | Date:         |
| NAMES AND SIGNATURES OF WITNESSES |                                      |               |
| Name: <i>Patricia E. Wilson</i>   | Signature: <i>Patricia E. Wilson</i> | Date: 1/13/99 |
| Name:                             | Signature:                           | Date:         |
| Name:                             | Signature:                           | Date:         |

Note: Prima facie evidence of execution may optionally be obtained by execution of this document before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by a certificate from a U.S. Consul.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: Human Gene Therapy Research InstituteApplication No./Patent No.: 09/229,212Filed/Issue Date: January 13, 1999Entitled: HUMAN SUPPRESSOR tRNA OLIGONUCLEOTIDES AND METHODS OF USE FOR SAMEHuman Gene Therapy Research Institute, a research institution

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 9849, Frame 0045, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

- ☐ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

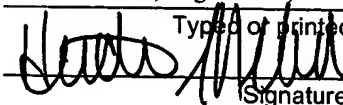
The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

October 30, 2001

Date

Heidi S. Nebel, Reg. No. 37,719

Typed or printed name



Signature

Attorney of Record

Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



UNITED STATES DEPARTMENT OF COMMERCE  
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OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

JUNE 11, 1999

PTAS

HEIDI S. NEBEL  
801 GRAND AVENUE, SUITE 3200  
DES MOINES, IOWA 50309-2721



\*100999338A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/15/1999

REEL/FRAME: 9849/0045  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS) .

ASSIGNOR:  
PANCHAL, REKHA G.

DOC DATE: 01/13/1999

ASSIGNOR:  
LINK, CHARLES J., JR.

DOC DATE: 01/13/1999

ASSIGNEE:  
HUMAN GENE THERAPY RESEARCH  
INSTITUTE  
1415 WOODLAND AVENUE  
IOWA METHODIST MEDICAL CENTER  
DES MOINES, IOWA 50309

SERIAL NUMBER: 09229212  
PATENT NUMBER:

FILING DATE: 01/13/1999  
ISSUE DATE:



3-15-99

04-01-1999



SHEET

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Pat

100999338

ached original documents or copy thereof.

## 1. Name of conveying party(ies):

Rekha G. Panchal  
Charles J. Link, Jr.

## 2. Name and address of receiving party(ies)

Name: Human Gene Therapy Research InstituteInternal Address: Iowa Methodist Medical CenterAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Street Address: 1415 Woodland AvenueCity: Des Moines State: Iowa Zip: 50309Execution Date: January 13, 1999Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

## A. Patent Application No.(s)

09/229,212

## B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Heidi S. Nebel

Internal Address: \_\_\_\_\_

Street Address: 801 Grand Avenue, Suite 3200City: Des Moines State: Iowa Zip: 50309-2721

## 6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41).....\$ 40.00☒ Enclosed (If this amount is insufficient, please charge Deposit Account 26-0084)☐ Authorized to be charged to deposit account

## 8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

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01 FC:581 40.00 00

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## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Heidi S. Nebel

Name of Person Signing

Signature

3/10/99

Date

Total number of pages including cover sheet, attachments, and document:

3

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231